VIRGIN ISLANDS HOUSING FINANCE AUTHORITY

HOUSING DEVELOPMENT GUIDELINES

A. CRITERIA AND PROCEDURES FOR PROPOSAL REVIEW AND APPROVAL

These Guidelines are the result of an examination of present housing development policies or the Virgin Islands Finance Authority ("Authority") and the finding that there exists a need to create a standardized administrative process through which the production of affordable housing can be initiated, developed and made available to the program.

The guidelines that follow set out the basic procedures through which the preceding objectives are to be achieved. Additionally, they are intended to supplement an application and review process and system for construction management and final project approval.

All proposals submitted by Developers and Contractors to the Virgin Islands Housing Finance Authority, whether or not they were initiated by the Developer or solicited by the Authority must meet the criteria set out in these Guidelines. However, it is recognized that some areas of the guidelines may have to be tailored to specific projects, and revisions will be made from time to time by the Authority. Areas to which the guidelines apply include:

1) Projects initiated by Developers who seek endorsement of their construction projects for the Affordable Housing Program as a means to receive Affordable Housing Tax benefits.

2) Projects using construction of end loan financing from the VIHFA, and marketing assistance.

3) Projects using VIHFA's technical assistance in particular areas, such as pre-qualifying and serving loans for housing applicants and providing access to the applicant master list.

4) Developers responding to VIHFA' s solicitation for development proposals.

The Executive Director is authorized with respect to any development to waive or modify any procedure or provision herein, where deemed appropriate for good cause, as long as the modifications are consistent with the Low and Moderate Income Affordable Housing Act of 1990, the Authority' s Rules and Regulations, and Agreements under applicable bond issues.

SOLICITATION OF PROPOSALS

The Executive Director may from time-to-time take such actions as may be deemed necessary and proper in order to solicit proposals for the construction of housing. Such actions may include advertising in newspapers and other media, mailing of information or any other method of public announcement which the Executive Director may select as appropriate under the circumstances. The Executive Director may impose requirements, limitations and conditions with respect to the selection of preliminary and final proposals as are considered necessary or appropriate. The Executive Director may cause studies and other research and analyses to be performed in order to determine the manner and conditions under which available funds and assets of the Authority are to be allocated and such other matters as are deemed appropriate relating to the selection of proposals. The Authority may also consider, subject to the approval of the Board, unsolicited proposals for financing and development.

THE PROPOSAL

The Virgin Island Housing Finance Authority may, from time-to-time, issue notices of solicitation for proposals to perform various construction and related tasks under the Affordable Housing Program. In response to such notice, these Guidelines as well as any specific information necessary to the project will be provided by the Authority.

When proposals for development are solicited, review will be in two stages. The initial step will be a review of Qualification Statement submitted by all interested developers. Selected qualified Developers will be requested to submit proposals for specific projects.

Developer's Qualifications

In order to participate in any program of the Authority which has as its objectives; the creation of lots or the construction of a housing development, a Developer must:

1) Be duly organized, validly existing, qualified and licensed to do business under the laws of the Virgin Islands and shall be in good standing in the Virgin Islands and shall have the power and authority, corporate or otherwise, to own properties and carry on business as is now being conducted.

2) Demonstrate specific, measurable housing construction experience, expertise, and adequate staff capacity to undertake the proposed development. A developer without sufficient experience, expertise, or staff is encouraged to strengthen his or her record by entering into a joint effort with a developer or development consultant who has an established record of success, the required resources and who assumes an active role in such a joint effort.

3) Be capable of proceeding promptly to construct and complete the housing development or project.

4) Demonstrate to the satisfaction of the Authority, the availability of sufficient financial resources to obtain adequate construction financing to complete the construction of the proposed development or project.

5) Have an acceptable history of meeting all applicable requirements of and obligations to the Authority and other lenders.

6) Have a commitment to construct and market the proposed development in accordance with all applicable federal and local "Equal Opportunity", "Employment of Project Area Residents and Contractors" and "Affirmative Fair Marketing" Guidelines .

7) Agree to secure and maintain insurance during construction of the project with the Authority being named as an additional insured. Coverage shall include Worker' s Compensation Insurance, Public Liability and Property Damage Insurance, Motor Vehicle Liability Insurance and Professional Liability Policy. The amounts for each are as specified in the Authority' s Rules and Regulations and/or are found as a part of the Authorities "Project Specification". The insurance company or companies issuing the foregoing policies must be licensed to do business in the Virgin Islands.

8) Agree to hold the Authority' s officers, agents and employees, harmless from any and all claims made against the Developer' s officers, agents and employees who arise out of any action or omission of the developer or any of its contractors, officers, employees or agents.

DEVELOPER'S SUBMITTALS FOR QUALIFICATION REVIEW (FIRST STAGE)

a) Complete Qualification Statement

b) A copy of the Developer' s business license and other evidence of the firms ability to perform legally as a developer in the Virgin islands (certificate of good standing, copy of most recent Annual Report To V.I. Government).

c) A portfolio of both construction work in progress and work completed.

d) Experience of development team.

e) Financial Statement.

DEVELOPER'S SUBMITTAL OF PROPOSAL (SECOND STAGE)

a) Small-scale site location map, indicating shopping centers, schools, recreation, transportation and other services.

b) Site plan showing buildings, roads, parking, recreation, utilities, etc.

c) Typical dwelling unit plans, showing a proposed furniture layout.

d) Typical dwelling unit elevations.

e) Typical building elevation, if the development consists of multifamily units.

f) Representative cross section of site, showing location of building and elevations, depicted at a minimum of 5 ft elevations, 2 ft is preferred.

g) Projected construction schedule, displaying milestone stages of construction as well as details of trade work durations.

h) Statement that project will comply with all applicable codes, laws, rules and regulations.

i) A statement that the project will meet or exceed the requirements of the solicitation for proposal, these guidelines, the attached specifications and design requirements.

j) Schedule of sales price(s) for units to be constructed.

k) A cost estimate of the probable construction cost utilizing the CSI/AIA Master Specification format for defining major cost divisions.

l) Indication of financial interest from a lending institution.

REQUIREMENTS FOR CONSTRUCTION LOAN CLOSING (THIRD STAGE), if applicable

a) Executed Affordable Housing Development Agreement.

b) 3 sets of approved architectural plans specifications and Affordable Housing Development Plan to VIHFA/HPR/DPNR/Legislature.

c) Building, Electrical and Plumbing permit (DPNR).

d) Earth change / CZM permits (DPNR).

e) Driveway permits (DPW).

f) HUD Environmental Approval

g) Fire-safety permit (FSD)

h) Construction Schedule.

i) HUD Master Conditional Commitment.

j) Evidence of land ownership (Deed from VIHFA to Developer).

k) Builders risk and liability insurance / payment and performance bonds.

l) Evidence of properly established escrow account for purchaser deposits.

m) Pre- sales Contract(s).

n) Declaration of Covenants and Restrictions by VHFA on land to ensure compliance .

o) Affordable Housing Tax Benefits

EVALUATION PROCESS

Criteria for evaluation and selection of proposals

The Authority may choose to negotiate and contract with any qualified developer or contractor whose proposal shall be deemed by the Authority to best fulfill the intent of the Affordable Housing Program. To this end, the Authority shall approve a proposal on the basis of the following criteria:

1) Design innovations that are likely to reduce cost of housing construction.

2) The Architect, management agent, engineer, marketing representative, and other members of the proposed development team having the qualifications necessary to perform their respective functions and responsibilities.

3) The developer and/or contractor having the experience, ability and financial capacity necessary to carry out their respective responsibilities.

4) Dwelling units priced at a level which best meets the goals of the Affordable Housing Program.

5) The best utilization of site in terms of density, aesthetics, safety, physical use, minimization of erosion, minimization of infrastructure costs and other factors.

6) Developments that do not look like low income "projects", are not overpowering, are of comfortable human scale and are easily identifiable with the local character.

7) The degree to which the project will involve local Virgin Islands residents in the development and construction team.

8) The proposed development will be economically feasible and financially achievable.

9) The housing development is consistent with the current housing objectives of the Affordable Housing Act.

10) That the proposed development has or will have sufficient access to supporting social services, including recreational facilities for youth, transportation, schools, employment, retail shopping, and all necessary utilities and infrastructure improvements.

11) That the location of the proposed development is consistent with the Government' s policy of dispersing housing throughout communities and avoiding undue concentrations of person and families of low income and rental housing, except where overriding considerations of economic need necessitate modifying these requirements in order to accomplish the housing objective of the Government.

12) That the proposed housing development will provide safe, sanitary and decent housing, meeting the requirements of all applicable building, zoning and environmental standards.

13) That the Developer' s proposed sales prices are the maximum prices, the upper limit for negotiation and shall not be subject to increase. (Where a Development agreement is not entered into within 120 days from the acceptance date of the proposal , the Developer' s price may be adjusted if requested by the Developer and the U.S. Department of Commerce Composite Construction Cost Index or other generally acceptable index for cost changes show an increase in cost during the interim period . the Developer will not be entitled to any such increase if the results of the Developer' s failure to provide all materials required for the execution of the Agreement).

14) That the Developer has a plan of finance and indication of financing interest from a lending institution.

B. DESIGN AND CONSTRUCTION STANDARDS REVIEW

The Authority will carry out the design and construction review for all development projects built for the Affordable Housing program. A process for project development has been established whereby all construction proposals are reviewed in stages from schematic design to the finalization of construction documents. The Authority will provide guidance throughout the process to ensure the program' s goals and functional and technical requirements are met consistent with the original plan submitted by the developer and approved by resolution by the Board of Directors of the Authority.

This process will ensure prompt resolution of the sometimes contradictory needs of program, design and site. The process must ensure that the approved projects meet the specific needs of the Affordable Housing Program.

The project must conform to all applicable codes of the Virgin Islands and the Federal Government. These will include, but not be limited to, general construction, environmental concerns, historic preservation, land use and zoning.

Each single family home must have a certain minimum square footage of space and amenities for proper functioning of a home while the overall design is to be reviewed to minimize detrimental social or physical impact on the surrounding community. The quality of materials provided will be reviewed to insure that no excessive maintenance costs will be borne by the home - buyer and life cycle cost is lowered. The quality of any common facilities that may be provided such as roads, utility lines, sewage treatment plants, tot lots/other recreation facilities, and other amenities should meet industry standards to ensure long-term use.

General Guidelines for Applicable Codes and Regulations

All Developers involved with projects under the Affordable Housing Program must become conversant with the applicable areas of the following codes:

1) The Virgin Islands Building and Zoning Codes.

2) The Virgin Islands Coastal Zone Management Handbook for Home - builders and Developers.

3) The Virgin Islands Environmental Protection Law.

4) Drainage and Flood Plain Management Technical Procedures for the V.I.

5) Regulatory Handbook for Flood Damage Mitigation in the Virgin Islands.

6) Virgin Islands Occupational Safety and Health Act.

7) "2003 International Building Code and any subsequent amendments thereto" as set forth in Act #6697 – Bill #25-0216, by the 25th Legislature of the Virgin Islands.

8) Applicable Federal Regulations and HUD requirements. (See HUD Handbook 4145.5, Architectural processing and inspections for Home Mortgage Insurance).

9) Local and Federal Equal Opportunity Requirements.

Specific Requirements for local approval process

1) Subdivision Permits (DPNR)

2) Earth Change / CZM Permit (DPNR)

3) Building Permit (DPNR)

4) Electrical Permit (DPNR)

5) Plumbing Permit (DPNR)

6) Driveway Permit (DPW)

7) Sanitary Permit (if public sewer is used) (DPW)

8) Certificate of Occupancy (DPNR)

9) Application to WAPA for construction meter and for final electrical hook-up (WAPA)

10) Cultural Resource Survey (DPNR)

11) Affordable Housing Tax Benefits (VIHFA)

Specific Requirements for HUD Approval

1) HUD Environmental Review (see review checklist)

2) HUD Architectural and Engineering Review

3) Application for Project Appraisal and MCC

4) HUD assignment of Fee Inspector

5) HUD Compliance Inspection

6) As - built surveys

Specific Requirements for Closing Completed Units

1) Final Subdivision Permit/Registered subdivision plot plan, and certified As-Built Drawings

2) As-built plot surveys

3) Water Quality test for cisterns

4) Water Supply and Disposal inspection Report

5) HUD compliance inspection reports

6) Certificate of Occupancy

7) Termite inspections certificate

8) Community association documents filed of record

9) Additional requirements per VIHFA checklist

PROJECT DEVELOPMENT REVIEW

The Architectural Plan and Specification Development will be the responsibility of the Developer who shall be guided by the Project requirements provided by the Authority. In developing the Project from design schematics to construction documents, the AIA Architectural Plan Developments process as outlined in the Architect owner Agreement Documents # AIA B151 shall be employed. The successful adherence to this guideline and review process is an essential part of ensuring an acceptable set of Design and Construction documents.

Please note that if no specifications manual is provided by the Developer, then the plan sheets themselves must carry more detail to insure complete contract documents, covering all subject matter concerning the dwellings components, methods of installation, etc.

1) **Schematic Design Phase**. This is the Conceptual Design effort to establish the Authority' s requirements for the project, and to define these requirements so that the Authority and the project team clearly understand the scope and limitation of the services.

   Main design requirements of the Schematic Design are the following:

   a) Prepare written project program
   b) Prepare schematic design studies
   c) Prepare probably project cost
   d) Hold project review with in-house team and developer
   e) Secure the Authority' s written approval of Phase I and authorization to proceed with minimum supervision.

2) **Design Development Phase**. This is the "Design Freeze" phase to research and develop the Schematic Design Studies to the point of proving compatibility of all systems incorporated in the project. The intent is that subsequently, final contract documents can be developed from the Design Development document with minimum supervision by the Authority.

a) Prepare Design Development Drawings
b) Prepare outline specifications
c) Verify Design Criteria with Applicable agencies
d) Hold in-house and Developer review

3) **Contract Document Phase**. This is the design effort to prepare final contract drawing and specification necessary to construct the project. Final documents should evolve smoothly from the information provided in the Design Development Phase.

a) Prepare contract drawings
b) Prepare contract Specifications
c) File contract documents with applicable authorities

Building Design Guidelines

Building design should provide for an attractive living facility and environment suited to the social economic and recreational needs of resident families and individuals. It should provide for ease of circulation and housekeeping, visual and auditory privacy, appropriate light and ventilation, fire and accident protection, economy in maintenance and use of space, accessory services, energy efficiency, and sanitation facilities.

1) **Allowable Housing Types:**

a) Single Family detached
b) Single Family semi - detached Townhouse
c) Single Family apartment - type Condominium

Units can be either all single family three (3) bedroom units or a combination of three, two, or one bedrooms. When in combination the ratio should be approximately 8:1:1.

2) **Acceptable Building Systems**

a) Reinforced Concrete block throughout
b) Reinforced concrete block with frame interior.
c) Reinforced concrete with concrete block or frame interior

d) Steel frame with masonry exterior
e) Steel frame with lath and plaster exterior or other acceptable composite material

Other building systems must be submitted to the VIHFA for review and approval

3) **Recommended minimum unit sizes**

a)	Three Bedroom home	1,100 square feet
b)	Two bedroom home	900 square feet
c)	One Bedroom	600 square feet

4) **Recommended minimum space requirements**

a)	Master bedroom	156 square feet
b)	Bedroom Two	124 square feet
c)	Bedroom one	100 square feet
d)	Kitchen	70 square feet
e)	Dining area	90 square feet
f)	Living area	150 square feet
g)	Living / dining	240 square feet
h)	Linen closet	4 square feet
i)	Storage closet	8 square feet
j)	Laundry room	32 square feet
k)	Balcony/Porch	100 square feet
l)	Miscellaneous	

5) **Access and circulation**

Space and facilities should be provided for convenient access to and circulation within dwellings for occupants and for movement of furniture and supplies. The relationship of rooms within the living unit and the relationship of living units to each other should provide a degree of privacy commensurate with desirable living conditions.

- Entrances facilities

Entrances should have appropriately sized exterior platforms/landings, when access is not from a paved area such as a porch, terrace, garage or carport. All entries front, side or rear must have overhead coverage, to the extent that no weather hits directly onto the entry door, itself. In cases where this is not possible, or is too costly for such overhead coverage (roofing) then partial coverage and protection is acceptable as long as doors are properly protected from wind

driven rain entering the dwelling. In no case shall the whole door be exposed to weather.

- Door and Openings

Recommended minimum doorway widths should be:

Public Doors	
Main entrance to building	3-0
Secondary public entrance	3-0
Service entrance	2-8
Public stairway	3-0

Private Doors	
Main entrance to living unit	3-0
Secondary entrance to living unit	2-8
Bathrooms, toilets in living unit	2-6
Habitable rooms	2-6

A door with an appropriate locking devise should be provided at each entrance to a building, living unit and required stairway enclosure: within the living unit, a door should be provided at each opening to a bedroom, toilet room and closets. Entry doors require a dead bolt with a min. 1-inch throw and an entry lockset that are keyed alike. Preferable all entry doors and dead bolts are keyed alike to any particular dwelling unit.

- Circulation

Each bedroom should have access to a bedroom without an intervening bedroom, kitchen, or principal living or dining area. Bedrooms should not afford the only access to a required bathroom except in one bedroom units. Neither a bedroom nor a bathroom should afford the only access to a habitable room.

- Stairways

Stairways and landing should provide for safe ascent and decent under normal and emergency conditions and for transportation of furniture and equipment. They should be designed to minimize noise transmission into adjacent living units.

Stairways having three or more risers should have a handrail 30-34 inches in height on at least one side of the stairways. Handrails should have intermediate rails or ornamental closures (banisters or picket, or solid walls) which will not allow passage of an object 4 inches (102 mm) or more in diameter. Stairways, as per code require all raiser's to be the same height,

within a staircase run, even when interrupted with a landing.

6) Light and Ventilation

Light and ventilation should be provided to achieve a healthful environment within the dwelling and so located as to provide an acceptable degree of comfort. Structural spaces should have natural ventilation to reduce conditions conducive to decay and to release stored heat. Ventilation should be consistent for the removal of excessive moisture vapor in living units. Cross ventilation in all rooms is preferred.

7) Fire Protection

Every living unit should be constructed so as to reduce fire hazard, and should be separated from every other living unit by construction or distance to restrict the spread of fire. It should also be designed to provide means of safe egress in the event of fire, i.e.: Fire Egress windows are required in any bedroom, without a door to the exterior.

(a) Combustible walls which are penetrated with electrical outlets or other mechanical devices should have interior (cavity) fire protection.

(b) Walls should extend at least 12 inches above top of roof.

(c) Supporting wall beams and columns should have one hour fire rating.

Interior Fire Protection: Party, Common and Zero Lot- Line Walls

(a) Walls should extend the full height of the dwelling without opening from foundation to the roof.

(b) Walls separating row houses may be carried up to the underside of the roof sheathing and sealed tightly.

(c) Plumbing stacks may be placed in party, common and Zero Lot line walls where wall construction provides a minimum of one-hour protection on each side of stacks. Penetration of the wall by electrical outlets or recessed cabinets should not be back to back, and there should be a minimum of one - hour protection around penetration.

(d) Fire Alarm and Extinguishing Systems: all building should be fire protected based on the National Fire Code Standards.

8) Accessibility to the Physically Handicapped

The American with Disabilities Act provides specific criteria for housing units required to be accessible to the physically handicapped. See Act for specific directions.

GUIDELINES FOR SITE DEVELOPMENT

Site development includes the arrangement of all facilities necessary to crate a safe, functional, convenient, healthful, durable and attractive living environment for residents. This section gives the basic guidelines and considerations to be used by developers in planning subdivisions, individual sites and Multi- family Housing developments.

1) Land Use

Land use planning for all housing should relate appropriately to all site conditions and to the existing or permissible development of adjoining properties.

a) Building Location and Arrangement

The use of a proposed site should be planned for buildings so arranged on the site and having characteristics which assure that:

(i) The property has adequate visual appeal.

(ii) The property can be operated and maintained at costs reasonably to income.

(iii) The land use and other site planning are met.

(iv) Zoning and other local regulations are complied with.

The building arrangement and location should relate well to:

(i) The natural; topography, avoiding deep cuts, fills, excessive foundation wall depth, unnecessary steps and steep access gradients.

(ii) Climatic conditions, assuring maximum benefit from and protection against, as appropriate, sun wind, temperature precipitation, etc.

(iii) Attractive on - site views.

Building location, arrangement, and orientation should assure adequate open - space for outdoor living areas, all facilities, services, amenities and for interior natural light, air and privacy.

b) **Intensity of Development**

The number, size and type of dwellings along with parking spaces, recreation and other open spaces should be determines by the characteristics of the site, its location, land cost, and acceptability by the community.

c) **Noise Control**

Through the use of site design techniques such as building location and orientation, window placement and the use of barriers, predictable undesirable site noise should be moderated to as close to acceptable levels as practicable.

d) **Site Surrounding**

The site design should be arranged when practical and possible to harmonize with the complement functions and appearance of site surrounding which have a significant bearing on the site. Where the surroundings of a site have incongruous functions or undesirable visual conditions, buffers or screen devices sufficient to separate or modify these unpleasant conditions should be provided.

No site should be developed where external influences on the site create conditions undesirable for residential use such as:

(i) Hazardous landslides falling rock, or other unstable slope conditions due to site topographic or geologic conditions:

(ii) Unwarranted risks from man- made hazards such as the presence of hazardous materials, or the presence of potentially hazardous industrial activity or material in the surrounding area; and

(iii) Nuisances from odors, vibrations, unsightly areas nearby landfills, inconvenience or other nuisances.

2) Utilities

The site design should provide for all utilities in a manner which allows economy in construction and maintenance. It should be arranged to recognize existing easements, utility lines, etc., and permit connection to existing facilities where necessary, and for the proper functioning or drainage of utilities.

a) Installation:

Where utilities will be installed below ground, they should be located in the right-of-way of a street or alley, or in an easement. All utilities and service connections that will be located under street pavement should be completely installed, properly back filled and graded, and approved throughout the length of the street before any pavement base is applied.

Electrical and telephone distribution systems should be provide underground in all residential developments unless it can be established that installation is economically unfeasible.

3) Streets

The street system should be designed to provide for all traffic needs and at the same time create a street arrangement that will make as attractive neighborhood and good building sites. Streets located with proper regard to topography and traffic flow increase neighborhood desirability and minimize development expense. The proposed street system within a subdivision should be tied in with the existing streets system. The proposed street system should also provide for the continuation of the existing community' s system.

Street Patterns are numerous and can create a wide variety of community patterns. Streets should serve both as areas for pedestrian and automobile movement and as fixed spaces for separating activities. Access, safety, economy and livability should be considered in street design.

a) Street Construction

All streets and parking areas should have sufficient gradient to provide for adequate drainage. Streets gradient should not exceed 18%. Storm sewers or drainage ditches should be provided to accept surface run-off and prevent pooling on roadway areas. Street sub-grades should provide a stable platform for the base and wearing surface under all geologic, hydrologic and climate conditions. The sub-grade should be judged acceptable according to soil type and anticipated traffic loads.

The base should be constructed in a manner which will provide a suitable course for the application of the final surfacing. The composition and depth of the base should be appropriate for the type and amount of traffic anticipated, which shall include water delivery and trash removal vehicles (trucks).

Hard surfaced wearing surfaces are the only type of surfaces generally acceptable. These can be cement concrete pavement or asphalt concrete. All-weather surfaces can be accepted on a temporary basis. However, before the project closes out, a permanent Hard Surface finish must be applied. (all road/street installations are subject to FP-96 Federal Highway requirement.

b) **Related Improvements**

1) **Planting strips**: When provided, should not be less than 12 inches in width. Planting at intersections should not interfere with lines of sight necessary for safe driving conditions.

2) **Streets lighting**: In addition to the required street intersection lighting, it may be desirable for the Developer to bear the cost of street lights installation throughout the subdivision.

4) <u>Site Grading</u>

Site grading should be designed to establish building floor elevations and ground surface grades which:

a) Minimize earth settlement problems.
b) Avoid concentrating run off onto neighboring properties where erosion or other damage will be caused.
c) Provide usable outdoor space.
d) Minimize erosion.
e) Avoid deep cuts and fills.
f) Minimize the need for banks, retaining walls or terracing, and avoid long or repeated flights of steps
g) Allow for homeowner's to fence property easily.

Grades which direct a concentrated flow of surface drainage over existing or proposed slopes should not be designed.

All earth slopes with grades of 3 to 1 or steeper should be planted with appropriate vegetative cover to minimize erosion.

Maximum gradient for usable open space should be 10 percent.

5) Drainage

Provision should be made for the best available routing of runoff water to assure that building or others important facilities will not be endangered by the path of major emergency flood runoff which would become active if the capacity or the site storm drainage systems is exceeded. All designs must meet the 100 year storm criteria.

a) Swales and open ditches

In areas with an open drainage ditch, where these facilities intersect streets, culverts and bulkheads, and/or drainage diversion walls adequately sized and constructed to prevent the flow of water across the pavement surfaces and erosion of the roadway base as required. Where water flow is planned to cross any roadway, purposefully, a concrete swale shall be installed at the appropriate location and of the appropriate width and depth as per engineering determinations for volume of water (ie: 100 yr. storm).

Where Swales or drainage ditches intersect at sidewalk or driveway, an adequately sized culvert or bridge should be provided. In the case of driveways that intersect with roadside swales, driveway aprons should be design as a part of the swale with similar slopes. Walks should not be designed as drainage ways.

b) Storm Sewer (need to meet new stormwater requirements)

A storm sewer or swale discharge into ponds, swales or ditches should have either rip-rap, head wall, or other similar protection to prevent undermining of the outlet pipe and erosion of the side slopes.

Consideration should be given to emergency outlets when the storm sewer systems are inoperable due to blockage or when the design capacity has been exceeded.

Head walls and other appropriate construction should be placed at the open ends of storm sewers to prevent excessive erosion and undermining of conduits.

c) Surface Drainage

Developed portions of a site which can be adversely affected by a potentially

high ground water table should be drained where possible to surface drainage facilities adequate for the disposal of excess ground water.

Septic systems should be placed 50 feet downhill of cistern, when not possible the requirement is: top of septic elevation is to be at least two feet below the cistern bottom elevation and placed no closer than 20 feet away from cisterns. (note: always check w/ DPNR for latest criteria)

6) The Proposed Site

The site design should be arranged to unitize and preserve the favorite features and characteristics of the site and to avoid or minimize the potential harmful effects of unfavorable features.

a) Topography

In the design of a site, the effects of topographic conditions on the cost of development and operation should be considered when locating various uses on the land. Land uses should be combined with site conditions in a manner which permits correction of potential hazards. All elements of the site plan should be designed to the natural contour of the land as closely as possible and practicable.

b) Vegetation

Existing healthy trees, shrubs, and natural cover of good quality which will contribute to the living environment and which can be saved within the site design should be preserved.

7) Yard and Building Setback Distances

The setback distance of building from the front property line and the street lot line should:

(a) Be diversified to assure visible variety in building and space relationship avoiding monotony.

(b) Be consistent with the best building placement considering the topography and other site conditions.

(c) Provide space for facilities for necessary functions such as walks, drives, parking space and plant materials.

(d) Be adequate to assure reasonable visual and auditory privacy for indoor and living areas.

(e) Minimize adverse effects of fumes, headlight glare, and other nuisances.

(f) and must meet all applicable zoning setback codes.

Buildings should also be set back from parking areas and screened to minimize head light glare into habitable rooms and should be arranged to prevent direct or concentrated discharge of automobile exhausts into any window.

8) Parking Areas

Adequate parking space should be provided for residents, guests and, where appropriate, service vehicles. Where practical, additional parking space should be planned and reserved for future use.

a) Number of spaces

The number of parking spaces to be provided should be based on individual analysis of each housing proposal.

Detached single family housing should have one parking space per unit on each lot. This space should have at least an all weather surface and minimum dimensions of 10 feet by 20 feet.

Off - site parking spaces for multi- family housing may be substituted for on-site parking, if available, and acceptable to the local authorities.

b) Parking Bays

Parking bays for multi- family projects and townhouses should meet the following:

(i) Minimum single space dimension should be 9 feet in width and 18 feet in depth.

(ii) Maximum single distance from a parking space to a public entrance of apartment building served should be.
- Non-elderly 200 feet
- Elderly residential parking space 100 feet

- Guest parking space 250 feet

(iii) Wheel stops or other appropriate barriers should be provided and suitably placed to prevent unwanted vehicular encroachment beyond parking area limits.

9) Walks

Walks should be provided for sale convenient access to all dwelling and for safe pedestrian circulation throughout a development between facilities and locations where major need for pedestrian access can be anticipated.

Minimum walk widths should be:

a) Principal walks serving more than one unit 4 feet
b) Minor walks serving only one unit 3 feet
c) One & two family dwelling entrance walks 3 feet

10) Services

Necessary services supplied by the local community should be provided the required space and accommodation in the site design to permit economical operation and maintenance.

Direct and convenient site access should be provided for all deliveries and services including furniture moving van, fuel trucks, refuse collections, utility meter reading, mail deliveries, fire fighting equipment and ambulances.

a) Garbage and refuse

Single family housing should have space adjacent to each living unit for refuse can storage. Multiple family housing projects should have an outdoor facility for garbage and refuse collection and disposal which can be maintained in a sanitary, sighted condition where other provisions have not been made. Collection stations should be designed with easily cleaned, durable or paved surfaces.

b) Service screening

Service areas and facilities should be screened.

11) Planting Design

Planting design should coordinate appropriate new plant materials and their ecological requirements with the climate, soil, orientation, water courses, existing vegetation, related natural resources and manmade facilities. A variety of plant materials should be provided to enhance the appearance of building and grounds, provide necessary screening, help separate incompatible use areas, arrest erosion and reduce noise.

a) Lawns

Lawns preparation should include a surface layer having a minimum depth of 4 inches of surface soil with known local capability of satisfactorily lawn growth.

12) Site Details

Elements of the site such as shelters, service structures, walls, fences, planting tubs and boxes, benches, patios recreational equipment and paved areas should be furnished according to occupant needs and sponsoring agency' s guidance.

a) Laundry drying yards

Laundry drying space should be provided in suitable areas and located away from public view where other laundry drying facilities are not furnished.

b) Walls and fences

Walls and fences should be included in the site design as appropriate to provided safety, screening, noise, reduction or grade transition.

Guardrails or other suitable barriers should be provided on accessible retaining walls or at other locations which, because of the height (24 inches or over) or other factors, constitute a hazard to life safety.

13) Outdoor Lighting

All public areas where pedestrians can be anticipated after sunset should be adequately lighted for security purposes. Arrangements should be made for the permanent maintenance and operation of such lighting.

14) Common Use Facilities and Recreation

Improved open space should be provided for common usage and for recreation. The improvement should be consistent with the size of the development, age levels, and the needs of intended occupants and should take into consideration operation and maintenance costs. The recreation space should be adequate, appropriately equipped and should allow for both active recreation, such as playgrounds or sports, and for passive recreation such as parks and sitting areas.

Recreation areas for the elderly should be separate from areas designed for use by children or young adults in developments accommodating both the elderly and younger families.

SPECIFIC GUIDELINES FOR SITE GRADING AND DRAINAGE

1) General

Construction complaints and structural defects due to inadequate grading and drainage grading and drainage remain one of site development' s biggest problems. The following guidelines are applicable to all proposed development. Also see #5 Drainage, in the "Guidelines for Site Development", section.

A. Drainage of Surface Water should be provided away from all buildings and off the lot in a manner that will:

(i) minimize possibility of dampness to below grade walls and crawl spaces;

(ii) prevent adverse supporting soil behavior;

(iii) prevent soil erosion; and

(iv) prevent standing or ponding of water on site.

B. Site Grading and Drainage should:

(i) provide suitable access from abutting street to the dwelling and any accessory buildings;

(ii) provide immediate diversion of water away from building and off the site;

(iii) avoid concentrating runoff onto neighboring properties where erosion or other damage may be caused;

(iv) provide usable outdoor space for occupants; and

(v) minimize erosion.

2) Finished Grading

All unpaved lot areas, except those preserved in an appropriate natural condition, should be fine graded to provide smooth even surfaces conforming to elevations noted below. All visible rock and debris should be removed prior to fine grading.

A. Minimum Protective Slopes

All walls and foundation of building and any water- supply well should be provided with protective slopes to assure immediate drainage and diversion of surface water away from these structures.

(i) provide minimum fall of 6 inches away from structure in 10 feet, except as restricted by side lot lines or other major considerations, without regard to soil type.

(ii) provide at least 6 inches in 25 feet in all other unpaved areas subject to expansive or collapsible soils.

(iii) drainage swales or valleys formed by intersecting slopes should have adequate depth, width and longitudinal gradient to carry away the maximum predictable volume of storm water runoff.

(iv) areaways for sub-grade windows and entrances should be provided with effective drainage facilities. Catchments area should be as small as possible and must be protected from overflow of storm water from adjacent areas.

B. Maximum Slopes

Height and steepness of slopes and maximum gradients of unpaved drainage channels should be such as can be satisfactorily maintained without erosion or land slippage and should provided satisfactory access to and around the structure. For access around

building and for maintenance of building and lot improvement, provide an area generally at least 4 feet wide with a gradient away from building no steeper than 1 in 4 (25% gradient).

C. **Suitable Drainage Structures**

Drainage Structures such as paved gutters, drain inlets and subsurface drain lines should be insulted where necessary to protect against dampness, flooding, erosion or other damage by surface water or ground water.

Perimeter foundation drains are necessary on all houses with sub-grade habitable living spaces in situations where water and/or soil conditions warrant their use.

3) Walks, Steps and Driveways

A walk and any necessary step should provide safe and convenient use from house directly to the street or to a driveway connected to a street. Walk and step construction should be of durable and appropriate material, on stable, adequately drained sub-grade or bed.

a) **Walkway and Step Design**

(i) Gradient should not be steeper than 1 in 10 (10 %)

(ii) Cross-slope should be adequate for immediate drainage of surface water off walk.

(iii) A single step; in a walk and any flight of steps of more than 5 feet total rise should be avoided where ever practical; substantial handrail of durable construction must be provided if more than a 30-inch rise in a single flight.

b) **Driveway**

Driveways should be provided from street to parking area; preferably it should be at the side of the building unit and not at the front. Construction should be of suitable sub grade, base drainage and surfacing so as to be durable under the use and maintenance contemplated.

(i) Longitudinal gradient should not be less than one percent or more than 14 percent except in unusual circumstances.

(ii) Gradient transitions should be provided at top and bottom of a steep

driveway to prevent dragging of vehicle undercarriage or bumper.

(iii) Gradient of a required parking space should not be steeper than 5 percent.
(iv) Driveway width, minimum of twelve (12) feet.
(v) Driveway apron, minimum four (4) foot radius before intersection with roadside drainage swales.

ARCHITECTURAL DRAWINGS GUIDELINES

Minimum construction documents Submittals requirements for final review of proposed housing development.

A. Plot Plan

Minimum scale or 1" = 20 feet, or 1/6 A = 1 foot, showing:

1) Lot and block number;

2) Dimensioned length of each boundary;

3) North arrow;

4) Dimensions of front back and side yard

5) Location and dimensions of garage, carport, and other accessory buildings;

6) Location of streets, curbs, walks, driveways, approach slabs, surfacing and utilities;

7) Location of steps, terraces, porches, fences, trees, shrubs, retaining walls, slopes, and drainage swales, channels, pipes and related facilities;

8) Location and dimensions of easements and established setback requirements, if any;

9) Grade elevations will be provided at;

a) First floor of dwelling and floor or other accessory buildings;

b) Finish curb or crown of street at points of extension of lot lines;

c) Existing and finished grade elevations at each corner of the plot and each principal corner of the dwelling;

d) Finished grade elevations at the toe of any slopes or retaining walls;

e) Other site elevations necessary to show proper grading and the flow routes of surface drainage.

f) Detailed existing and finished grade elevations are required where topography, or design of the structure, necessitates special grading, drainage, sub- drainage, slope stabilization or function design;

B. FLOOR AND FOUNDATION PLANS

Minimum scale of 1/4" = 1 foot, showing:

1) Separate foundation and cistern plan with construction details, including any sub-drainage facilities. Where on-site soils are expansive, compressible, collapsible or organic, or where subsidence is possible, foundation plans must be accompanied by supporting soil, geologic, ground water and structural design information.

2) Separate foundation plans of each floor or lower floor showing construction details showing crawl space type, or slab-on-grade if any.

3) Plan of any attached terrace, porch, garage, or carport.

4) Direction, size, and spacing of all floors and ceiling framing members, girders, columns or piers.

5) Location of all partitions and walls, indicating door and window sizes and direction of door swing.

6) Location and size of all permanently installed construction and equipment (i.e., kitchen cabinets, closets, shelves, plumbing fixtures, water heaters and pumps). Details of cabinets may be on separate drawings, or provided as a "Shop Drawing", for approval by VIHFA prior to manufacturing/purchasing.

7) Location and symbols of all electrical equipment, including switches, outlets, fixtures and panels, unless provided on a separate sheet, or in the electrical plan.

C. EXTERIOR ELEVATIONS

Minimum scale 1/4 A = 1 foot, much show:

1) Front, rear, and both side elevations.

2) Windows and doors- show size unless separately scheduled or shown on floor plan.

3) Wall finishes, materials.

4) Depth of wall footing, foundations or piers; show stepped, if at more than one level.

5) Finished floor line.

6) Finished grade lines at buildings, shown extending out 10ft from build.

D. SECTIONS

Minimum scale of 3/8"= 1 foot, shall be provided through the following areas of the structure:

1) Exterior wall sections must show details of construction from the bottom of the foundation to the highest point of the roof.

2) Show wall sections through any portion of the dwelling where rooms are situated at various levels.

3) Stairwells, landings and stairs, including headroom clearances and surrounding framing.

E. DETAILS

Provide the following:

1) Elevations and sections through kitchen cabinets, indicating shelving, scale not less than 3/8" = 1 foot.

2) Sections and details of all critical construction points, special structural items or special millwork, scale not less than 3/8" = 1 foot.

F. ELECTRICAL PLAN

Minimum scale ¼" = 1 foot. Must show the following:

1) That all work will be performed based in NEC standards.

2) All electrical fixture, outlets and switches denoted by types and height off finished floor.

3) All panel, service feeder, grounding, loading and main switching information.

4) Schedule of fixtures with type, make, models and finishes.

5) A note that all circuit breakers must be labeled and tested by an electrical contractor prior to calling for final inspection.

6) Electrical meters to be furnished by WAPA. Meter locations to be approved by WAPA, prior to plan submittal to VIHFA. Provide letter of confirmation WAPA has excepted planned location.

7) Provide separate service and meter for sewer plant.

DWELLING UNIT CONSTRUCTION SPECIFICATIONS GUIDELINES

The specifications that follow are a minimum guide to aid developers. These are intended to supplement the local and other national codes that HUD may require.

1) Roofs with minimum slope of 3:12 pitch in order to be self-cleaning and to be good catchments for drinking water. If of concrete or wood, waterproof with; Vandux, neoprene-Hypalon, or equal. (need to meet national drinking water standards)

2) Exterior walls shall be of reinforced concrete, concrete masonry units, precast units, or other masonry materials or other composite materials approved by the Authority.

3) Wall finish-exterior: cement plaster, stucco, or synthetic plaster compound.

4) Wall finish-interior: Cement Plaster, and/or Gypsum wallboard. Showers, tubs and bath waincots to have ceramic tiles.

5) Floor finish - interior: vinyl or better except bathroom to be ceramic tile or terrazzo. Base; vinyl or ceramic tiles shall be installed. Contractor to furnish five square feet of each color tile used as a part of the closeout package.

6) Ceiling: Cement plaster, stucco, drywall acoustic materials, exposed plywood and rafters.

7) Gallery and service porch finish: Polished cement, quarry tile, terrazzo or equal.

8) Stair and railing: Cement non-slip finish. Railing both sides; interior stairs of units may have railings on one side. Railings designed to protect children from passing through, 4" maximum spacing between elements; Stair to have minimum of 7'-0@ head clearance. Minimum rise and run of stairs shall be 7 inches rise and 12 inches run.

9) Closet: 1-1/8" thick louvered door, shelf wood and hanging rod of metal. Minimum depth on the closet shall be 24 inches. Linen closet with doors and 5 shelves. If plywood is used for shelves, edge- banding will be required. Chipboard or particle board is not acceptable.

10) Kitchen:

a) Back splash: Ceramic tile or laminated plastic sanitary type. If laminate over plywood is used, provide double seal against water penetration by sealing backsplash to countertop during installation of backsplash and then utilize a waterproof caulking on face at countertop, filling any gaps and leaving a slightly coved (WHAT?), even and neat finish.

b) Counter tops 3/4" min. thick, luan, edai or Philippine mahogany plywood faced with ceramic tile or plastic laminate.

c) Cabinets: commercial or custom made hinged doors 5/8" thickness luan, edai or Philippine mahogany plywood faced and edge-banded with plastic laminate.

d) Storage Closet with door and shelves, 18"x18" or larger.

e) Kitchen sink: 18 ga. minimum stainless steel, double bowl. Clips also stainless steel.

f) Rough-in 220V electric service to 30" range.

g) Refrigerator: Provide 36" space and electrical outlet.

h) Water heater: Electric, gas lined 20 gallon or equipment solar heating system.

11) Laundry:

a) Separated from kitchen

b) Laundry tray: Enameled C. I., fiberglass.

c) Provide recessed box with water valves and drain, electrical service and space for 110 V washer and 220 V dryer.

d) Clotheslines: 40 linear feet per dwelling unit.

e) Where clothes lines are in yard provide paved walkway to and under drying area.

f) Drying areas shall be screened from public view.

g) Utility storage cabinet same construction as kitchen unit.

h) Provide venting to exterior for dryer location, including an automatic closure device to prevent insects, and or other intrusion.

12) Bathroom:

a) Floors and base ceramic tile or terrazzo. Ceramic tile at shower, up to 6'-6" AFF. Provide marble threshold at door.

b) Wainscot of ceramic tile at plumbing walls. Ceramic tiles at shower 6'-6" high.

c) Enamel water closet (toilet) with solid seat and lid. Water conservation type.

d) Lavatory of enamel with hot and cold water and angle stop on each line.

e) Recessed, or surface mounted medicine cabinet with mirror and a separate lighting fixture.

f) Two 30 inch towel bars, one rob hook

g) Soap dish at shower or tub.

h) Toilet paper holder.

i) Plumbing lines: cold water, waste, soil and vent - 40 PVC; hot water; copper or CPVC.

j) Bath accessories surface mounted except soap dish at shower, which can be ceramic.

MISC:

13) Screens at window and sliding doors.

14) Exterior doors 1 3/4" flush solid core, or paneled - rail & style door, waterproof glues. Full coat of paint or clear finish on all edges and surfaces, 2 coats, min.

15) Wood studs or 20 gauge min. zinc coated steel frames for interior walls.

16) All lumber and plywood including door frames and door stop to be pressure treated No.1 grade. Door stops, are to be minimum ½" and maximum ¾" thickness, x 1-1/2".

17) Hardware: Federal specifications FF-H-106 series 161, high frequency use. Construction keyed. No master keys. Include peephole, chimes or buzzer at front door. Sliding glass door with pin or sledge type lock to permit locking in partially opened position.

18) Window to comply with IBC 2003 edition for wind resistance. Color to be approved by VIHFA. Window to bear certificate of performance, Egress window from each bedroom (see HUD requirements).

19) Lighting Fixture: Porcelain not allowed except in storage areas and pump room. Residential type to meet (HUD) MPS. Plastic type preferred complete with lamps.

20) Provide meter base for each unit. If needed, provide separate meter base for community spaces such as stairs, hall ways etc. these should be vandal proof fixtures.

21) Telephones and cable outlets for master bedroom and living/dining area.

22) Rain water: Strainer on roof drain and cistern overflow. Locate overflow so as not to affect lower windows, doors, porches, etc. Grade surrounding area at overflow to be

easily maintained by Buyer, (i.e.: via lawn mower) Provide a "Splash Block" or "Riprap" to prevent erosion at overflow outlet, outflow. If the overflow outlet pipe has to be extended, underground, to provide an outlet for proper drainage/outflow, then a "Clean-Out" shall be installed at a point, just outside of the cistern.

23) Designs should not require artificial ventilation. Cross-ventilation designs are recommended.

24) Paint: Minimum two (2) coats in addition to appropriate type of primer coat, per materials to be painted. Exterior: Oil or acrylic latex; Interior: Semi Gloss washable enamels in kitchens and baths, satin or flat wall finish elsewhere. Surface must be properly prepared to receive finish coats. Paint shall be locally available.

25) Any exterior door, swinging outward are to have security type hinges.

B. Site Improvement

1) Topsoil and lawn: 4" topsoil. All disturbed areas to be grassed and landscaped.

2) Trees: Existing trees 4 A and over to be retained and protected during construction.

3) Water service; sch. 80 PVC.

4) Sanitary sewer: schedule 40, PVC. Storm sewer: Coated metal or concrete.

5) Parking: One parking space per dwelling unit, ten spaces per community of fifty residents.

6) Street lighting per WAPA requirements, to be turned over to local government.

7) Streets, curb and sidewalk be laid out and constructed to PWD requirements.

8) Cistern: 10 gallons per square foot roof area for one story buildings. 15 gallons per square foot roof area for two story buildings. Unless newer regulations apply to project location, where potable water is available, in such case a reduce capacity is acceptable subject to VIHFA approval.

a) Water proof interior with min. 2 coats of thoroseal or approved equal.

b) Cistern access should be sanitary sealed when not located within the

building and shall be barred and locked.

c) Cistern should be 50% full and perform water quality testing before closing.

d) Individual detached or semi- detached homes shall have one Meyer's electric pump or approved equal and one 30 gallon pressure tank. Pump and tanks to be securely enclosed to prevent theft or vandalism.

e) Where applicable provide metered connection to potable water with automatic device to fill cistern.

f) Provide health Certificate showing water suitable for consumption.

g) Address numbers shall be fastened to the front of each unit depicting the plot number and or street address, or unit number in min. 4" lettering. Location facing street front in single family housing and or entry access, for multifamily housing.

C. GUIDELINES FOR PRODUCT DELIVERY

The construction of all Affordable Housing Development shall be performed in accordance with the Affordable Housing Development Agreement which defines the roles and responsibilities of the Developer and the Authority. While the Developer' s role is that of the builder and seller of homes, the Authority' s role is a limited one having to do with the oversight of such developments.

This oversight, however, goes beyond that of the traditional lender' s role since the Authority has an interest in ensuring that its applicants receive acceptable products and that its interest in the properties transferred to the Developer is safeguarded.

In its responsibility for mortgage and loan financing, ensuring that the program' s applicants receive quality homes and that participating Developers receive timely cooperation from supporting government agencies, the Authority' s role in housing production will involve the following tasks:

a) providing input into the initial stage of a project' s development to influence cost containment, design innovations and aesthetics, and construction quality;

b) assisting Developers in establishing a uniform reporting process for progress reporting

and issue resolution;

c) project monitoring and contrast compliance reporting;

d) Coordinating or facilitating the flow of services from the various agencies of government that provide assistance to the Affordable Housing Program.

In the implementation of these tasks, the Authority has established a number of mandatory requirements for Developers. The standards for these requirements have borrowed heavily from the field of Construction Management and are essential to the performance of the Authority' s oversight role. Their use is intended not only to protect the Authority' s interest in the program but to assist developers where they are deficient in areas of construction management.

The following requirements are mandatory submissions for participation in the development of homes initiated through the Virgin Islands Housing Finance Authority.

1) **The Project Delivery Plan**

Before project mobilization, the developer must prepare a project delivery plan in cooperation with the Authority. This plan will outline the project scope, budget, basic systems to be utilized, manpower, methods and procedures to be followed. This will be a strategic plan against which the final performance of the project is evaluated and the success of the project judged.

The project delivery plan should include the following components:

a) Project description
b) Master Schedule
c) Milestone schedule
d) Project organizational chart and staffing plan
e) Explanation of roles, responsibilities and Authority of team members
f) Site mobilization and utilization and utilization plan
g) A quality assurance program and how it will be implemented
h) Listing of meetings, including types and frequency.
i) Sample forms to be used
j) Project budget

2) **Project Schedules**

The Developer with the assistance of the Construction Manager will develop a series of

schedules designed to enable the Authority and the Developer to have a clear concept of the time markers for accomplishing the various components of the project. These will consist of the Milestone Schedule, the Master Schedule and the Design Development and Construction schedules All of these are inter-dependent and require approval of the more general schedule before the more specific.

3) **The Milestone Schedule**

This Schedule, for instance will include start up and completion dates for schematic design, design development, construction documents and construction while the Construction Schedule will outline the various time-frames for construction activities. It will establish the board time-frames of the overall project and the initial and latest acceptable dates for each activity. The milestone schedule will be part of the Developer' s submittal for proposal review.

4) **Design Development Schedule**

The Developer should prepare a schedule for the planning and execution of all Design Phase requirements. This Schedule should be compatible with and be incorporated into the Master and Milestone Schedules. As the scope of the project is developed and further refined it will provide the basis for the further updating of those schedules. The Authority will closely monitor and review this phase to assist in keeping the project within the initial guidelines of the project.

5) **Construction Schedule**

At the commencement of the construction phase, the Developer with the assistance of the Authority, shall prepare and submit a detailed construction schedule for review and approval. After approval, this schedule should be incorporated into the Master and Milestone schedules.

The details should include but not be limited to:

a) Site development
b) Infrastructure development
c) General construction
d) Final acceptance

The Construction schedule should be acceptable to the Authority as providing an orderly progression of the work within the contract time. The Authority shall monitor the project for compliance with the construction schedule.

6) **Schedule Updating**

Updating the various schedules is an invaluable part of providing accurate reports on actual activity progress compared to that established by schedules. It is also a means of determining how each party associated with the project should proceed with the work in order to meet the overall completion dates. Schedules should be updated on an agreed upon interval between the Authority and the Developer.

The Construction Manager will perform monthly review and assessment to determine the development team's adherence to established schedules. To facilitate this effort, a systematic process will be established for gathering and analyzing scheduling data and for participating with the Developers in the schedules updating process.

7) Quality Review

The most important function for the Authority in its oversight role is that of monitoring the various projects for contract compliance. This role stems from the need to ensure that the single family mortgage end-loans will be issued for homes that are of the quality established in the Affordable Housing Development Agreement and in the Individual contracts with applicants. Also of interest, is protecting the Authority's subordinate security interest in the land that maybe used by the Developer.

Developers must review and become familiar with the Authority's program for monitoring each project for compliance with approved construction plans and specifications. The Program will include the setting up of various procedures for preliminary plan review and pre-construction and project close-out conferences. It will be implemented to guaranty acceptability at the project's final completion. The Authority's construction managers will work with Developers in familiarizing them with the plan and will have the right to reject work considered deficient or defective.

Additionally, an acceptable system for determining substantial completion will be developed and made available to all Developers. Developers shall review and become thoroughly familiar with these requirements. Only after these standards have been met will a certificate of final completion be issued.

8) Regulatory Facilitation

An equally important role which is designed to assist Developers is the facilitator's role that the Authority has played since the program's inception. The various agencies that are mandated to provide governmental services for the Affordable Housing Program prove to be a formidable hurdle for individual developers to surmount. The Authority is committed to

reducing the difficulties of this process.

C. CONSTRUCTION CONTRACT AGREEMENT AND ADMINISTRATION

In not meeting the Affordable Housing Goals, the VIHFA will not contract with developers to perform construction services for the Authority, nor will it be responsible for the sale of homes. These responsibilities will be solely those of the Developer. While the Authority will play an important role in the initiation of the various projects it will only play an indirect role in the management of their development.

The Authority' s role will be more of the traditional Housing Finance Authority, with the responsibility for setting applicant eligibility standards, prequalifying applicants and maintaining an eligibility list, monitor for construction quality compliance, certifying projects for Affordable Housing Tax benefits, making government owned land available for development, and using Mortgage Revenue Bond financing to establish low cost mortgage loans.

Its role of construction management will involve the following tasks: a) providing input into project development in the initial stage to influence cost, design, construction quality and timely delivery of the project. b) Aiding developers with project scheduling, project reporting and establishing systems for accurate documentation. c) Project monitoring for contract compliance and d) coordinating or facilitating the flow of services from the various agencies that provide assistance to the Affordable Housing Program.

To ensure an acceptable product delivery, the issues of cost, aesthetics, building innovations and construction quality must be discussed and resolve in the initial stage of the project, The agency must provide independent project cost estimates and value engineering methods as a back drop from which to view the developer' s suggested development costs; it will use its knowledge of the pitfalls and opportunities that have grown from the history of the program development to provide valuable input in shaping each project. In order for the implementation of individual project to work within the cost and quality constraints of the program, construction management practices are an essential ingredient

Delivery time for project development and delivery of homes for the program is very important since it is an issue that contributes to project cost. It is also an issue involving the timely use of the mortgage allocations and the orderly movement of applicants from their existing residences to new homes. All of these require that extraordinary efforts be made to hold a developer to his project completion schedules. VIHFA is prepared to aid developers with project scheduling, establishing proper systems for coordination and reporting of information and establishing systems for accurate documentation of building information. All of these elements, if handled professionally can save time and money in project development.

The role of facilitator in connection with coordinating the various services that are mandated to be performed by local and federal agencies is an invaluable one in hurdling the time consuming bureaucratic processes of government agencies. From the initial preliminary subdivision permit to obtaining the certificate of Occupancy and all the other special exceptions that are needed in between to make project work, the Authority must be in a position to enlist the help of the various agencies on an expeditious basis.

The most important function for the authority in its role in construction management is that of monitoring the various projects for contract compliance. This role stems from the need to ensure that the single family mortgage end-loans will be issued for homes that are of the quality established in the developer' s agreement, and that the project will be finished without impediments that will jeopardize the second interest position the Authority will hold on the land sold to the developer.

GENERAL CONSTRUCTION ADMINISTRATION GUIDELINES

a) The initial Proposal Agreement and the final contract must be free of ambiguities. Construction drawings must be through. No details shall be left unfinished and subject to ambiguous interpretations.

b) The project budget must reflect prevailing costs. If a developer price is so low that it causes concerns, he should be required to encumber the deferential between his price and the market price to ensure that the project will be finished.

c) The varying roles of the Developer and the Authority should be precisely defined.

d) VIHFA Inspector shall have authority to accept or reject materials and workmanship, based on Contract Documents.

e) All defects in construction shall be repaired within two (2) weeks of notice of defect to contractor.

f) Each construction project shall be required to have a project schedule. This must be developed in consultation with the Authority and reflecting the contractual deadlines.

Specific Requirements of the Developer

1) During construction there will be at least one meeting or conference per week including the VIHFA, Developer, Contractor and all Subcontractors.

2) Before final inspections units shall be mopped clean, glass washed, windows' moving parts cleaned from dirt/dust, and lubricated as needed to be in good working order, water and electricity turned on, and area landscaped. This shall be repeated if necessary, upon final punch listed work is accepted.

3) Contractor shall keep one set of reproducible drawings marked daily with as-built conditions. At closing, VIHFA shall be provided with Mylar reproducible including as-built conditions.

4) Before a project begins the Developer must supply the Authority with a specified number of construction documents and appropriate technical submittals, plan of manpower utilization, evidence of obtaining all required permits and project schedule information.

The promotion of affordable housing: Developers involved in the program will be responsible for the planning, design, construction and sale of housing units. As such the role of contract administration will be a reduced one.

The Authority' s role in construction Administration will be one of providing input into project development in the initial stages to influence cost, design, quality and timely development of the project. These are essential ingredients that determine the success of failure of a development project.

The Authority has a vital role in ensuring that the projects are finished on a timely basis, since the mortgage allocation is for a fixed period. This role requires a proper system for coordination of information transmission, reporting and coordination be established. Each project must start with the greatest understanding of all aspects of the project. VIHFA can perform a valuable service in aiding the Developer with project scheduling, weekly and monthly reporting, establishing systems for accurate Documentation. These are all elements that if handled professionally can save time and money for the developer.

Additionally, the Authority will perform the function of monitoring for contract compliance. In this role it will be the watch dog for the projects it helps set in motion and it will facilitating the flow of services from the various governmental agencies that provide assistance to the Affordable Housing Program.

Revised 1/25/08.